

# Evisceration of the small bowel through the perineal hernia

## Abstract

**Introduction:** Perineal hernias are an uncommon pathology, occurring mainly in women, it is also a result after abdominoperineal resection for rectal cancer occurring in less than 1 % or in pelvic exenteration in less than 10 %.

**Case report:** 93-year-old female, with a history of abdominoperineal resection, presented to the emergency department for small bowel evisceration with intestinal ischemia secondary to perineal hernia, with abdominal repair of the pelvic floor and the use of mesh.

**Discussion:** The diagnosis is clinical, but we can rely on diagnostic images, such as computed tomography or magnetic resonance imaging.

**Conclusion:** It is important to know the probable root cause and its therapeutic options, taking into account the surgical technique that can be coupled to the surgeon's individual experience.

**Keywords:** perineal hernia, pelvic floor, intestinal ischemia, evisceration, secondary hernias

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## Introduction

Perineal hernias are an uncommon pathology, occurring mainly in women due to pelvic floor alterations related to pregnancy, occurring five times more often than in men.<sup>1,2</sup> It is also the result of procedures in which a large part of the pelvic floor support structure is removed, as in abdominoperineal resection for rectal cancer, which occurs in less than 1 %, or in pelvic exenteration in less than 10 %.<sup>3,4</sup> Its incidence is variable and has been reported to be 0.3% for primary hernias and up to 6% for secondary hernias.<sup>2,3</sup> It is classified into primary and secondary, the primary ones are divided as anterior which appears in front of the transverse muscle of the perineum and posterior which appears at the level of the levator ani muscle, in secondary perineal hernias the defect is in the surgical incision and the content of the hernial sac is usually the small intestine. Risk factors are age over 60 years, obesity, malnutrition, smoking, diabetes, chronic diseases that cause ascites, elongated mesentery, infection of the perineal wound, failure of peritoneal closure, excision of the levator and previous hysterectomy, perineal prostatectomy and radiotherapy treatments.<sup>5-7</sup>

## Clinical case

93-year-old female, with a surgical history of abdominoperineal resection secondary to rectal adenocarcinoma 15 years ago. She began her current condition 2 days prior to her evaluation with perineal pain and bulging in the perineal region, so she was taken to the emergency department where she presented with a distended abdomen painful on palpation with no evidence of peritoneal irritation, with colostomy status with no output for 2 days and no gas channeling. In the perianal region, small bowel loop evisceration was observed through the perineal region with evidence of intestinal ischemia (Figure 1), hydric resuscitation was started, antibiotic impregnation, analgesic and immediate surgical management, general laboratories were requested where leukocytosis, elevated lactate by gasometry and increased creatinine were highlighted. The patient underwent exploratory laparotomy and manual reduction of small bowel loops through the perineal defect (Figure 2 & 3). Thirty centimeters of necrotic jejunum were resected 20 cm from the ileocecal valve with a purple cartridge GIA stapler (Figure 4). And a whole Barcelona type anastomosis is

performed with a purple cartridge GIA stapler. The entire Barcelona type anastomosis is performed with a purple cartridge GIA stapler. Partially absorbable mesh composed of light polypropylene and polyglycaprone of 10 cm is placed in the perineal defect and fixed to the peritoneum with 3-0 Prolene stitches with separate stitches. Omentoplasty is performed by fixing the omentum with Vycril stitches on mesh (Figure 5). Jackson Pratt drainage is introduced into the pelvic cavity and is exteriorized by counter-opening in the right iliac fossa. The abdominal wall is closed in planes, the skin is closed with staples and the procedure is concluded.



Figure 1 Small bowel evisceration with ischemia.

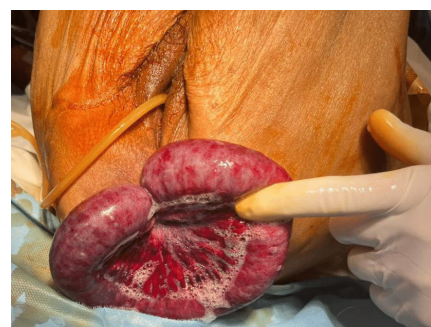
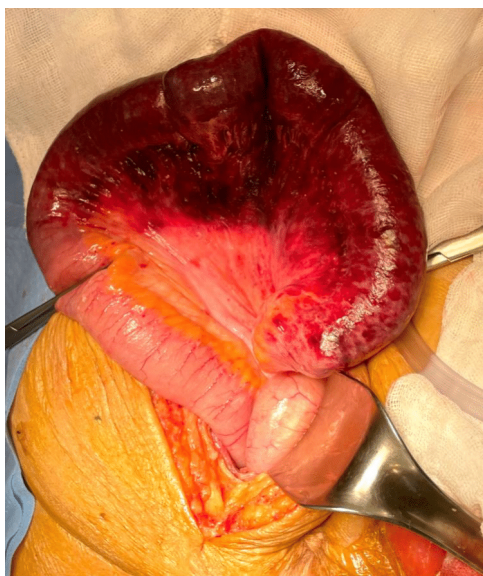


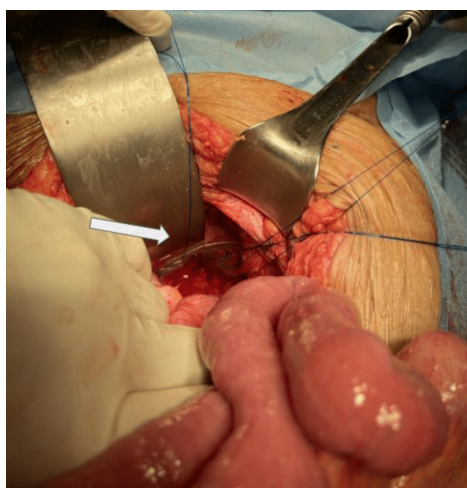
Figure 2 Manual small bowel reduction from the perianal region.



**Figure 3** Laparotomy showing evidence of vascular compromise of the small intestine.



**Figure 4** Thirty centimeters of necrotic jejunum were resected 20 cm from the ileocecal valve.



**Figure 5** Arrow shows the placement of the mesh in the hernia defect.

## Discussion

The anatomical pelvic support is complex, the front of the pelvis

is bounded by the internal surface of the symphysis pubis, while the sides are formed by the obturator internus muscles, the sacrum is in a central position in the posterior pelvis, with the piriformis muscles more laterally bounding the posterior pelvis.<sup>7,8</sup> These muscles contain contracting fibers innervated by sacral efferents S2-S4 on the pelvic side and by branches of the pudendal nerves on the perineal side.<sup>7,9</sup> The levator ani muscle complex is composed of three muscles, the pubococcygeus, iliococcygeus and puborectalis.<sup>4,7</sup> Perineal hernias are defined as protrusions of intraperitoneal or extraperitoneal contents through a defect in the pelvic diaphragm.<sup>4</sup> Stamatiou et al. reported that Garangeot was the first to report a case of primary perineal hernia in 1743, furthermore, in 1940, Wilensky and Kaufman classified pelvic floor hernias as extravaginal, peritoneal vaginal, perineal, perineal, pudendal, and pelvic quasi hernias.<sup>9,10</sup> The diagnosis is clinical, but we can rely on diagnostic imaging, such as computed tomography or magnetic resonance imaging.<sup>8,10</sup> The main presenting symptoms include the sensation of perineal pressure and pain, sometimes the patient may present urinary symptoms, or intestinal obstruction. On physical examination, the pelvic floor defect can be observed when the patient is asked to perform valsalva maneuvers, in our case small bowel evisceration with ischemia was observed. Strangulation is rare due to the laxity of the hernial orifices, however in our case it was present.<sup>8,9</sup> There are several surgical modalities for perineal hernia repair, which adhere to the fundamental principles of hernia surgery which is mobilization of the sac, precise incision, debridement and excision of the sac and defect repair.<sup>7,11</sup> The surgical technique in the repair of this pathology is not yet standardized due to the few cases reported in the literature, however the perineal or abdominal approach by an open or laparoscopic approach are adequate options.<sup>10,12</sup> The open abdominal approach provides superior anatomical exposure of the peritoneal cavity, allowing localization of the defect and adequate mesh placement with a consequent lower hernia recurrence rate. However, this approach is associated with a longer hospital stay, more postoperative complications, longer recovery period.<sup>11</sup> The laparoscopic technique has greater visibility of the dissection of the contents of the hernia sac, the hernial borders and the pelvic space. In addition, it allows the performance of an omentoplasty, which generally involves the application of an omentum flap to repair the pelvic defect, and with the benefits of laparoscopy in terms of post-surgical recovery.<sup>12,13</sup>

The combined laparoscopic and perineal approach may have its advantages, however, it is only recommended in special cases in which a wide exploration is required or associated with some other pathology.<sup>3,7,12</sup> The use of prosthetic materials for treatment arose from the need for a simple procedure that would increase tissue resistance and decrease tissue tension, these meshes can also be made via the abdominal or perineal route and can be synthetic or biological. Abraham Arap JF advises to cover the area of the hernia defect with polypropylene or composite meshes.<sup>3,11</sup> Other techniques described are the use of muscle flaps such as gracilis muscle rotation and omentoplasty.<sup>5,7</sup>

## Conclusion

As it is a very uncommon pathology, it is important to know the probable base cause and its therapeutic options, taking into account the surgical technique that is not standardized so far and can be coupled to the surgeon's individual experience.

## Acknowledgments

None.

## Conflicts of interest

The authors declare no conflicts of interest.

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